ABSTRACT OF THE DISCLOSURE

An image processing apparatus hierarchically compresses and codes image data by subjecting pixel values of the image data to a discrete wavelet transform, quantization and coding for each of one or a plurality of rectangular regions into which the image data is divided. The image processing apparatus includes a hierarchical coding unit to compress and code the image data in a state where the image data is divided for each hierarchical layer, to obtain compressed codes, and a distributively storing unit to distributively store the compressed codes that are divided for each hierarchical layer by the hierarchical coding unit.